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AUTHOR Brembeck, Cole S.
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ABSTRACT

The goal of educational strategy is to determine the kinds of behavior which are desired and to create those educational environments which most clearly support and encourage this behavior. This paper is an inquiry into the nature of formal and non-formal learning. The structural characteristics of each kind of educational environment are examined to determine the impact of these characteristics upon participants. Several hypotheses concerning educational strategy are developed. (SHM)

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PROGRAM OF STUDIES IN NON-FORMAL EDUCATION

Michigan State University

The Stratigic Uses of Formal and Non-Formal Education

Cole S. Brembeck

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THE STRATEGIC USES OF FORMAL AND NON-FORMAL EDUCATION

Cole S. Brembeck
Michigan State University

This paper inquires into the nature of formal and non-formal learning. The purpose is to examine the structural characteristics of each in order to find out their respective capabilities to perform educational tasks. The assumption is that if we knew more about what each is capable, or incapable, of doing our uses of these two modes of education would be more economical, efficient and effective.

The paper is really a speculative essay designed more to stimulate argument than to prove a thesis. The perspective is sociological in that it concerns the characteristics of the social organization of two modes of learning and the impact of these characteristics upon people who participate in them.

I should perhaps apologize in advance for dealing with things commonplace and familiar. All of us have been in schools and our perceptions of them are based on first hand experience. All of us have learned outside of school. Such learning is pervasive and certainly not novel. Still, I find ironical our familiarity with these modes of learning and our ignorance of them. Part of our problem may be that we tend to equate learning with instruction. The learning process so obviously involves instruction that we regard it to be the key shaper of what is learned. But the environment of instruction also teaches; it determines what is "caught" from the teaching, in contrast to what is "taught". And what is caught may have a more profound influence on human behavior than the cognitive learnings which are conveyed through formal instruction.

It is about the influence of the learning environment that we are most ignorant. To my knowledge there exists no satisfactory description or formulation of the environmental characteristics of school and non-school learning that tells us very much about the respective capacities of each mode to perform certain educational tasks. In this paper I hope to probe this obscure region or at least walk around it and survey its boundaries.

Some working Hypotheses

My explorations shall run in these ten directions, which I state in the form of working hypotheses:

1. The unique characteristics of formal and non-formal education may be discovered in their respective social structures. The critical factor is the structure of the learning environment.

2. That these unique structural characteristics equip each to perform certain tasks better than others.

3. That we have overloaded the formal system beyond its capacity with tasks it is not well suited to handle.

4. That we underutilize the non-formal system in terms of certain of its unique capacities.

5. That prescriptions of reform of the formal system which ignore its structural capacity are exercises in fultility.

6. That one of the critical differences between formal and non-formal education is their proximity to work, immediate action, and the opportunity to put to use what is learned. This difference is basic, for non-formal education is characteristically carried on within a context of action, work, and use. Formal education, on the other hand, takes place outside this context, just by dint of putting it into a school.

7. That for this reason non-formal education is a better mode where the object is to change immediate action or to create new action, and formal education is superior where immediate action is subordinated to abstract learning or concept building.

8. That future education policy must become total in the sense that it employs all the available means of education to meet increasingly diverse types of demands. The time when formal education could cope with all the learning demands of a complex society is past. We should realize it and adjust education policy accordingly.

9. That future education policy must reckon with life spans rather than school years. The education process must be viewed in the context of a developmental sequence that begins early in life and ends, if it ever does, with adults participating in the occupational sector of the economy and the responsibilities of citizenship.

10. That considering the changes that take place in an individual's educational needs over the life span and the variety of available modes of education, it becomes possible to sketch out a model for future educational policy and practice.

The Growing Interest in Non-Formal Education

The current disillusionment with formal education may be due in part to our miscalculation about the capacity of formal education to perform certain tasks. We overload the system with directions it cannot understand, and tasks it cannot perform. When it fails, we respond by adding more. Then we blame the system. Perhaps we should be blaming ourselves for not knowing more about the stress capabilities of the educational tools with which we work.

The same error in judgment could as easily be made now in the flush of enthusiasm for non-formal education. It, too, could be assumed to have magical properties which in fact do not exist, and its future could also be filled with sobering second thoughts. Presently, the assumption seems to be that formal education has fallen short: the task therefore is to develop non-formal education.

Perhaps the more fundamental assumption should be that <u>both</u> formal and non-formal education have built-in structural elements which condition their capabilities to contribute in defined ways to the attainment of certain educational objectives. Perhaps the fundamental task is to analyze more precisely the structural properties of each, to determine the potential of each for contributing to particular kinds of educational goals, and to build programs which utilize these strengths within a more unified and coherent policy of educational development. If this were done, investments in both school and non-school education might yield better payoffs.

The question is, if formal education has performed badly, why? Could it perform better if used more wisely? If non-formal education is to perform well, how and under what circumstances? Some light on these questions may be gained by inquiring into the basic structures which determine their capacities to perform.

The Structure of Non-Formal Learning

Something of the structure of non-formal education can be learned by reflecting upon the nature of learning in pre-literate societies. Education itself is old, as old as man's capacity to learn, but schools, as we know them, are relatively new on the human scene. In primitive society, non-formal education was the mode. A child required no specialized training to learn the things he needed to know. He learned from his father and other adults the arts of hunting and food-gathering. In somewhat later societies he learned to cultivate, plant, and harvest. Tasks were unspecialized and easily transmitted from parent to child. The learning process was spontaneous, with both parent and child largely unaware that it was taking place.

But societies tend not to remain primitive in their outlook and simple in their organization. Endowed with the capacity to learn, man started to control his environment for his own purposes. He developed fire to keep him warm, clothing to shelter him from the wind and cold, baskets and kettles to carry more than his hands could, and, finally, the wheel, to which he transferred burdens from his back.

Some men were better at certain skills than others; they became artisans, making copper pots, weaving baskets, and making wheels. Young men came to watch and to learn. They became apprentices, helping and learning at the same time. Probably the first formal schools sprang up around such artisans, and from such definable social and economic needs growing out of man's increasingly complex way of living.

My own appreciation of the structure of non-formal learning was deepened when I lived for awhile on the Northwest Frontier of Pakistan, near the Khyber Pass, where shepherd boys were a familiar sight along every country lane and road. When I began to observe one particular boy, my first reaction was: "How young to be tending a flock of sheep!" Yet it was obvious that this young shepherd knew well what he was about. He herded the animals with great skill along paths to and from the pasture lands. Where fences are unknown, he kept his flock within boundaries. He knew how to protect the sheep from menacing wild dogs and he could use his stick with great effectiveness. He recognized poisonous weeds, and steered his flock away from them. At age 10 he was a good shepherd.

This boy grew up in his vocation and was probably never aware that he was learning it. When he was very small, his father or older brothers took him along while they tended the flock. To protect him from the hot sun, they put him down in the shade of a bush. From there we watched and listened. As he grew older, he ran after the sheep, assisting his father in rounding up the strays. In the spring, at lambing time, he watched his father work with the ewes. He learned how to teach a new lamb to suckle. At shearing time he was there, assisting at first, then later, catching, throwing and holding the sheep for the shearer. From his earliest years he knew the value of the flock to his family. He saw his mother and sisters use the wool to card yarn from which the family clothes were made. The flock provided meat for the table. The wool and sheep that were sold brought the family its meager cash income.

Here, then, is a learning situation in which the young learn what they need to know, first by observing their elders carry on significant tasks in which they are skilled. Then, by taking part first in simpler tasks and later in more complex ones, they are finally prepared to train others. The training cycle is complete.

What does the Shepherdboy's education illustrate about the structure of non-formal education? First, it took place within the context of immediate and

meaningful action, work. Second, there was no gap between learning and the use of it. Indeed, learning grew out of the need for it. Learning and doing were so mixed up that it would be hard to sort them out. Third, learning took place as a part of normal living; there was nothing of the apparatus of formal schools, no lessons or classes, no artificial rewards and punishments. Learning was so natural that the shepherd boy was hardly aware that it was taking place. Four, the learner saw a connection between one aspect of the task and the whole task. He could easily see what caring for a new lamb meant to his family's welfare, because he had observed the life cycle of a sheep and its relationship to what he wore and ate. The boy did not need to be told that caring for sheep was important; this was one of the accepted values by which his whole family survived. Five, the shepherd boy's "teacher" was associated with his "student" in carrying on meaningful action. In a sense the boy's father was a co-worker, superior only in knowledge and skill. The role of teacher and student blended harmoniously. Six, the shepherd boy's education incorporated within itself some important factors which stimulate learning. There was no arbitrary decision about what the boy should be capable of doing at a certain stage of his development. As he demonstrated his readiness he simply assumed new responsibilities. He needed no external rewards, such as grades and certificates. His satisfaction came from assuming an adult role early in life. His learning provided a kind of security which comes from taking one's accepted place in the family and among one's peers. It should have come as no surprise to me that by the age of 10 this boy had already learned a vocation, perhaps his life's work.

Almost forty years ago John Dewey, the American philosopher of education, wrote about his conception of an ideal school. I find it of interest that Dewey incorporated many of these elements of non-formal education in his ideal school. Once he cast hi ideas in the form of a fictional visit to Utopia. The purpose of the visit, he said, was to learn what he could about the educational

system in Utopia.

Dewey's first observation was that in Utopia education was carried on without anything like schools, at least schools as we know them. He reported that children were gathered together in association with older and more mature people who directed their activity. They met in large grounds, with orchards, gardens and greenhouses. No group was larger than 200, and most of them much smaller, the Utiopians having found that people seem to work best in close, intimate, association. There were workshops which had all kinds of things for children to work with -- wood, iron, and textiles. There were also museums, scientific laboratories and books.

There were no arbitrary divisions of children into classes by age groups. Older children took part in directing the activities of those still younger. Some of those who liked especially to work with children later became Utopia's teachers.

How was learning carried on in John Dewey's educational Utopia? Here we see Dewey's sharpest departure from our present practice. Teaching was carried on much as the painters who were trained in, say Italy, when painting was at its height. The adult leaders combined their special knowledge of children with special gifts in certain directions. They associated themselves with the young in carrying on some line of action. As in older societies, where younger people were first apprentices who observed their elders and then took part with them in doing first some of the simpler things and then more complex tasks, so in these directed activities the adults first engaged in some work in which they themselves were competent, whether painting, music, scientific inquiry or observation of nature, or industrial production of some type. Then the younger children, watching them, listening to them, began to take their part in simpler forms of action, a minor part at first, until as they developed they accepted more and more responsibility for action.

John Dewey asked the Utopians about the objectives of their educational system. The Utopians at first did not understand what he meant. The whole concept of the school, of teachers, of students, of lessons had so completely disappeared that when Dewey asked about the special objectives of education the Utopians thought that he was asking why children live at all. The notion that there should be some special end which the young should try to attain was completely foreign to their thoughts. Dewey was led to the conclusion that what we regarded as objectives were so thoroughly engrained in the working activities of Utopian youth that they didn't have to think about them.

What are the main structural characteristics of non-formal education? They derive from its proximity to immediate action, work and the opportunity to put learning to use. These elements of the environment close the gap between learning and doing, find intrinsic motivation in the learning situation, imbed objectives in work and activity and associate learners and teachers in meaningful lines of action.

The Structure of Formal Education

We turn now to the structure of school learning. How does it differ from that of non-formal learning? What does its character tell us about its capacity?

First, formal schools are detached institutions, removed from indigenous practice. When the first schools sprang up around native artisans they separated youth from their families for periods of time, and made students of them. Schools became institutions for learning, teaching became a profession and learning became a recognized pursuit of the young. Thus schools in a cultural sense were broken off from the main stream of work and action.

This separation of learning from action has a deep psychological impact upon the learner. He begins his formal education knowing that what he will learn is removed from the everyday reality of adult society. It is academic. This awareness is revealed in many ways. For example, the common urge of students

to get "out" of school expresses a great deal about the meaning they attach to being "in". We speak of education as being "preparation" for the "real" world, thus denying it a reality of its own. Constant calls that schooling be "relevant" implies that by nature it is not. It must be made so.

All this is not to say that we do not value school learning. We obviously do. I am speaking about the <u>way</u> we value it, how that way illuminates the detached nature of schools, and how it subtly discounts the learning in the mind of the learner. Thus this structural characteristic of schooling modified and shapes its capacity to perform educational tasks.

Second, schools are in a sense ghettoes of the young who create their own society and values. The detached nature of modern schools makes this inevitable, though we continue to express surprise, and frequently disgust, that it happens. Adults in schools are presumably caretakers of the young, but the young actually end up taking care of themselves within their own adolescent culture. The kind of meaningful working relationships between adults and children, which Dewey foresaw, do not thrive in an age-graded school society removed from action and where the only adults are professional teachers who can only talk about the world of work and action outside the school.

Third, not only do schools set children and youth apart from adult society: they further segregate them among themselves. Students progress grade-by-grade, year-by-year, in a constant pattern of severence with adult teachers and the reestablishment of relationships. The system works against the development of meaningful relationships among either older and younger children or among adults and children.

Four, the apparatus of the schools is admirable suited to <u>teaching</u>; whether the same may be said for <u>learning</u> is open to question. Anthropologists like to observe that in preliterate cultures children are in most cases far more eager to learn than the elders are to teach, whereas in machine cultures children are less eager to learn and adults are more eager to teach. To what extent this

emphasis on learning in preliterate societies and on teaching in machine societies can be attributed either to the nature of preliterate and modern societies I do not know. I think the enigma does raise some interesting questions. Can it be, for example, that part of the answer may lie in the difference in modes of learning between preliterate and literate societies? In other words, in their different uses of formal and non-formal learning? In other words, in their different uses of formal and non-formal learning? Can it be that in substituting the discipline of classroom and the material rewards of grades for the pleasurable system of participating in adult-valued behavior we offend the basic social and biological nature of the young? Can it be that in spending the great resources we do on improving the arts of teaching we have actually failed to create stimulating environments for learning?

Fifth, firmal education depends to a large extent on deferred rewards. The immediate present is devalued. Only the future is truly meaningful. Formal education, then, must find its target point in future time, and teach students to deny the present, for the sake of later rewards, for example, admission to the next level of education, a job, "success". By nature it does not carry within itself satisfactions sufficient for both the present and future.

Sixth, the structure of formal schools influences the methods of learning they employ. Consider first, that since schools operate largely outside the context of immediate action, they must depend more on telling than on showing; whereas the sheperd boy learned largely from observation and action, his counterpart in a formal school must learn largely by being told. The sheperd boy was active. The school student, passive. Second, as knowledge increases, more and more time must be given over to telling, either orally or in print, or in demonstrating outside the context of action. Third, the student must learn to follow the lesson through abstract written or oral language. This requires special skills that must be learned if a student is to achieve well in school. Finally,

because it requires special skills, school learning becomes an art in itself.

These, then, are some of the conditions formal schools impose on learning, simply because they are detached institutions. The charge of irrelevance sometimes levelled at the schools can better be understood within this context; their success as places of learning depends in part upon their ability to recreate within their walls a learning environment as naturally compelling as that existing on the outside. That environment must be created; it is not naturally built into the structure of school learning.

Achieving the Best Fit Between Educational Means and Ends

I commented earlier that a new strategy in education policy should be to select from all the available means those with demonstrated capacity to achieve desired goals. The means also should be selected with due regard to such variables as: Who is to be educated? At what time in life? In what kind of programs? And for what purpose? The key is to find the best fit between means and ends. In this concluding section I would like to speculate about the fit of formal and non-formal education with respect to certain educational tasks.

The first task I would like to discuss is that of initiating and implementing developmental change. Considerable disappointment has been expressed about the ability of formal education to effect such change. This may be an instance of not using it well, for I suspect that initiating change and implementing change are two quite different ends and they call for the application of different means. Formal education may best fit the end of conceptualizing and planning change. Non-formal education may be better suited to implementing it.

The environment of formal education incorporates change agents, such as books written outside the indigenous setting, teachers trained in cosmopolitan centers, a systematic way of inquiring into subjects and organizing knowledge, and a tradition of research. The Western-type formal school is itself a foreign

import in many areas of the world, introducing new values and practices into idigenous environments. Thus the structural characteristics of formal education equip it to work out on the cutting edge of change.

I doubt that these same characteristics equip it to carry through and implement change. This may be one reason why specialized formal institutions created to deal with certain social problems very frequently fail to live up to expectations. Missing in their structures are the linkages which would permit them to get at the infrastructures which are to be changed. Their detached natures are the flaw.

Non-formal education, on the other hand, is geared to action and the application of knowledge. Where both the initiation and implementation of developmental change are the goals, a wise course would seem to be to link the two in a sequence beginning in knowledge generation, conceptualization, and planning and ending in application, work and action.

The work in agricultural development carried on by American Land Grant Universities is an example. Most breakthroughs in the plant and animal sciences came out of classrooms, laboratories and experimental stations. In themselves they would never have helped to revolutionize American agriculture. Beyond this formal system, and linked to it, was the non-formal which operated through extension programs. It was this system that penetrated the infrastructure of agricultural production. Here is a case where all the available means of education were well fitted to the tasks to be performed.

The second task I should like to discuss is that of preparation for the world of occupations. There seems to be little consensus on what should constitute a philosophy of occupational training. That there is a set of common competencies needed to undertake most jobs in modern society seems now to be accepted. The ability to read, write, and speak, to relate to one's society and culture, and to acquire some sense of citizenship are probably basic in occupational preparation.

When we come, however, to preparation for the performance of specific skills the issues sharpen considerably. What do the structural characteristics of formal and non-formal education equip each to do well? I would suggest that where the arena of action centers within formal education itself, that schools are equal to the task. Thus schools are a good place to train teachers to understand schools. They may be a poor place to train teachers to understand communities. In other words, when the arena of action is outside the formal school I begin to suspect that the school is a poor site for specific training. If, on the other hand, the school's detachment can be overcome by integrating it with the world of work the results may be surprisingly good. The training of doctors in teaching hospitals where classroom, sickroom, surgical room and laboratory are in close proximity is an example.

Now what are the implications of this for one of the very largest areas in which the schools engage in skill training: that of vocational and technical education? Here the general practice is quite different from that represented by the teaching hospital. Many vocational and technical education programs are isolated in formal schools and unrelated to the world of work. And too often these are ineffective. The reason may be that a formal system detached from the world of work where the knowledge is to be put to use is simply a poor choice of educational means to do the job. Could it be that these programs could better be set up within the shop, as a medical school in a teaching hospital, or that students could be better assigned to work for portions of each day on jobs for which they are training?

Not all school programs in vocational education are confined to formal schools. One such program that usually exhibits good teaching and learning is that of vocational agriculture. Here the program typically rotates between classroom and farm. In the classroom boys learn scientific knowledge of agriculture to which they are not exposed in the non-formal learning situation at home. On the farm they raise live stock, grow crops and test in practice the validity

of scientific concepts. Thought and action thus confront each other daily.

There are other aspects of this learning situation that are of interest. Teachers of vocational agriculture typically grow up on farms, a fact which gives them two qualities which Dewey found in Utopian teachers: skill in carrying on some line of action and credibility in the eyes of students. Another element is that the non-formal system of learning on the farm is used to reinforce the formal system, giving it a kind of legitimacy it would not otherwise have in the mind of the student. Conversely, the formal system reinforces the non-formal learning, giving importance to the projects which boys conduct on the farm. The best of both systems thus combine to create a compelling environment for learning.

A third task of education is that of teaching young children. Recent evidence points to the critical importance of the pre-school years in a child's learning. This period of non-formal learning seems to have great influence on how well the child learns during his years of formal schooling.

I would regard the elementary school as a reasonably effective means for teaching basic literacy and for introducing the child to the larger community in which he must live. The elementary school is an institution which is close to its surrounding cultural roots. It has a traditional linkage with the family; of all schools it probably finds it easiest to use non-formal approaches to learning. Its teachers are probably the most creative and most sensitive in using the child's background to stimulate school learning.

The secondary school is a very different institution from that of the elementary school. Historically it comes out of a different tradition. While the elementary school sprang from a popular desire for education and its teachers were drawn from the people, the secondary school came out of an intellectually elitist tradition and its teachers were drawn from higher institutions and universities. Historically, it was a very formal school, detached and without linkage to action or the non-formal systems of learning. Even today when

one works in elementary and secondary schools he can feel this difference.

Yet, it is this school to which modern society assigns the responsibility of educating, not just the elite, but the mass of our youth. It is this task of educating all the youth that I would like to turn to next.

The development of an appropriate strategy for the education of youth seems to me especially perplexing. We isolate them in formal schools at the very time when they are reaching for mature values and orientation. Instead of helping them develop really meaningful relationships with adult society and work we abandon them largely to their own devices, justifying out actions by saying that they are learning important things they will need in the future. We place youth in this holding pattern at the very time that biologically and psychologically they want to be "with it" rather than "out of it".

Large doses of detached school learning seem to me to be inappropriate for this age group and socially harmful. If the end of educating the young is to widen the generation gap, isolate them from the inherited culture, and sort out for election to the elite those who learn well through abstract symbols, then the formal secondary school is admirably suited to the purpose. If, however, the goal is something like that of John Dewey's Utopians, to associate youth and adults in a meaningful line of action toward the end of transmitting skills and culture the secondary school is probably a poor educational tool.

In many ways I think it may be argued that formal education generally is more appropriate for adults than youth. Adult learning usually springs from genuine motivations growing from life experiences in non-formal learning. Detached learning for adults may have the value of giving new perspective on experience, and of stimulating new ideas. It could be that in terms of the structural capabilities of formal and non-formal education to accommodate youth and adults our timing is just the reverse from what it should be. Perhaps it is the youth who most need non-formal education and adults formal education.

I would therefore take some stock in the newer forms of secondary schools without walls which combine intellectual search and applied activity and reserve purely formal education as an option to be used when individuals feel the need for it.

Conclusion

Underlying my approach to this paper is the conviction that learned behavior is determined by the environment in which it takes place. Behavior is shaped and maintained by its consequences. The learning environments of formal and non-formal education tend to be of a different character. They shape and maintain different kinds of behavior. The goal, then, of educational strategy should be to determine the kind of behavior which is sought and to create those educational environments which most clearly support and encourage it.

Modern society requires a wide range of behaviors in order to perpetuate itself and do its work. Yet, our assumption to date has been that formal education is capable of producing nearly all of them. And when it doesn't we cry for its reform. It is quite possible that formal education, right along, has been doing what it is good at and that it ought to continue. The difficulty may be that we now want it to do some things it is not good at. Perhaps it is time to seek other means which are naturally good at doing them better.

April 11, 1972